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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,610	11/25/2003	Michael Strickland	625.0056USU	5610

7590 07/18/2005

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EXAMINER

HORTON, YVONNE MICHELE

ART UNIT PAPER NUMBER

3635

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,610

Applicant(s)

STRICKLAND ET AL.

Examiner

Yvonne M. Horton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13, 24-28 and 30-39 is/are rejected.
- 7) ☒ Claim(s) 9, 14-23 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/05 & 5/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 2 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Until further clarification, the claim has been examined merely as including rivets as the fastening means.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4-7,10,11,37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent #4,476,662 to FISHER. Regarding claims 1 and 10, FISHER discloses a joist including at least one cold-formed chord (16,18) and (20,22), a plurality of cold-formed webs (23) and (24), and means (welds) for securing the chord (16,18) and (20,22) to the webs (23) and (24). In reference to claim 2, the chord includes spaced first chord (16,18) and a second chord (20,22). Regarding claim 4, the web (23) and (24) includes stiffening means (23). In reference to claims 5, 6 and 11, the web members (23) and (24) are a plurality of segmented webs (23) and (24) joined together by mechanical fastening means (welds). Regarding claim 7, the web member (23) has a different thickness than the web member (24). In further reference to claim 10, the

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webs (23) and (24) are intermediate the chords (16,18) and (20,22) which are lower and upper chords; respectively. Regarding claim 37 and 38, the opposing ends of the upper (20,22) and lower (16,18) chords are adapted to be load bearing.

Claims 1,3,8,10 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent #3,381,439 to THULIN, Jr. In reference to claims 1,10 and 39, THULIN, Jr. discloses a joist (20) including at least one cold-formed chord (26,28), a plurality of cold-formed webs (32) and (34), and means (55) for securing the chord (26,28) to the webs (32) and (34). Regarding claim 3, the securing means (55) includes fasteners, column 3, line 27. In reference to claim 8, the web segments (32,34) includes stiffening means (56a-d) disposed at the end and intermediate thereof. Further regarding claim 10, the webs (32) and (34) are intermediate the chords (26,28) which are upper and lower chords; respectively. Further regarding claim 39, the web (32,34) includes stiffening recesses (30) and securing means (55).

Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent #3,381,439 to THULIN, Jr. The structure of THULIN, Jr. inherently discloses the method of producing a joist (20) including the steps of forming an upper (26) and a lower (28) chord, forming at least one web (32,34), and fastening the web (32,34) between the upper (26) and lower (28) chords with mechanical fasteners (55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

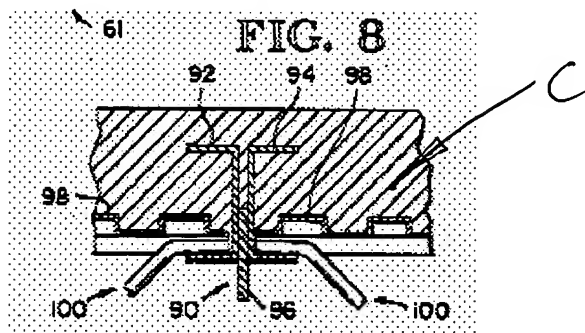
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #3,381,439 to THULIN, Jr. in view of either US Patent #2,630,890 to MACOMBER or US Patent #2,864,471 to WILLIAMS. THULIN, Jr. discloses the basic claimed joist except for explicitly detailing the use of a coating material. Both MACOMBER and WILLIAMS detail that it was known in the art at the invention was made to provide the joist assembly with a coating material (37, MACOMBER) and (column 3, line 15, WILLIAMS). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the joist of THULIN, Jr. with the coating of either MACOMBER or WILLIAMS in order to prevent the joist from corroding from prolonged exposure to the environment and/or to provide the joist with a very aesthetically pleasing appearance. Regarding claim 13, at least one of the web segments (32,34) includes openings (62) and a stiffening recess (56a-d).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #2,860,743 to CLIFF in view of US Patent #4,432,178 to TAFT. Regarding claim 24, CLIFF discloses a composite floor system including a plurality of metal joists

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consisting of an upper chord (2) having a vertical extension (8,10) and a horizontal extension (4,6) symmetrically disposed about the vertical extension (8,10); a lower chord (12) having a lower horizontal extension (4',6'), a plurality of web segments (14,16) thereby defining a vertical web (16), and mechanical fasteners (26) to fasten the chords (2,12) and the webs (14,16). CLIFF discloses the basic claimed floor system except for explicitly detailing a concrete slab wherein the vertical extension of the joist is embedded in the concrete. TAFT teaches that it is known in the art at the time the invention was made to embed an upper portion of a vertical extension (as at 96) of the web in concrete (C), see below. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the flooring assembly of CLIFF



with the upper portion of the vertical extension of the web member embedded within the concrete (C) in order to ensure stability and longevity of the flooring system.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #2,860,743 to CLIFF in view of US Patent #4,432,178 to TAFT, as applied to claim 24 above, and further in view of US Patent #3,381,439 to THULIN Jr. CLIFF, as modified by TAFT, discloses the basic claimed flooring system except for the mechanical fasteners specifically being rivets. THULIN, Jr. explicitly teaches that his

mechanical fastening means can be welds, rivets, or interlocking seams, column 3, lines 56-59. It would have been obvious to one having ordinary skill in the art at the time the invention was made to secure the members of CLIFF, as modified by TAFT, in order to more securely fasten the members together while also ensuring that the fastening members of the system can be replaced. Welds are usually harder to fix and do not allow for the members to be readily replaced. Rivets provide more flexibility with being able to replace worn fasteners.

Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #3,381,439 to THULIN, Jr. in view of US Patent #2,864,471 to WILLIAMS. THULIN, Jr. discloses the basic claimed joist except for explicitly detailing the use of a coating material. WILLIAMS details that it was known in the art at the invention was made to provide the joist assembly with a paint material, column 3, line 15 prior to the step of fastening. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the joist of THULIN, Jr. with the coating of either MACOMBER or WILLIAMS in order to prevent the joist from corroding from prolonged exposure to the environment and/or to provide the joist with a very aesthetically pleasing appearance. In reference to claim 33, THULIN, Jr. includes holes (62); however, THULIN, Jr. is silent with regards to how he forms his holes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the holes by stamping. Regarding claim 34, the step of forming the web (32,34) includes fastening a plurality of webs (32,34). In reference to claim 35, the webs of THULIN, Jr. do not have different thicknesses; however, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to select a web thickness suitable for the use intended as an obvious matter of design choice. The web thickness determines the strength of the joist or flooring member. Hence, depending upon the strength required for the floor would determine the thickness of the web. Regarding claim 36, the chords (26,28) includes reinforced sections (44,46) in order to accommodate greater loads.

Allowable Subject Matter

Claims 9,14-23 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (571) 272-6845. The examiner can normally be reached on 6:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (571) 272-6842. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yvonne M. Horton
Examiner
Art Unit 3635